US-08-446-530-7

10/553509

SEQ ID NO. 12

```
; Sequence 7, Application US/08446530
; Patent No. 5766851
;  GENERAL INFORMATION:
;     APPLICANT:  Shuldiner, Alan R.
;     APPLICANT:  Walston, Jeremy
;     APPLICANT:  Silver, Kristi
;     TITLE OF INVENTION:  SUSCEPTIBILITY GENE FOR OBESITY AND TYPE
;     TITLE OF INVENTION:  II DIABETES MELLITUS
;     NUMBER OF SEQUENCES:  28
;     CORRESPONDENCE ADDRESS:
;        ADDRESSEE:  Fish & Richardson P.C.
;        STREET:  4225 Executive Square
;        CITY:  La Jolla
;        STATE:  CA
;        COUNTRY:  USA
;        ZIP:  92037
;     COMPUTER READABLE FORM:
;        MEDIUM TYPE:  Floppy disk
;        COMPUTER:  IBM PC compatible
;        OPERATING SYSTEM:  PC-DOS/MS-DOS
;        SOFTWARE:  PatentIn Release #1.0, Version #1.30
;     CURRENT APPLICATION DATA:
;        APPLICATION NUMBER:  US/08/446,530
;        FILING DATE:  19-MAY-1995
;        CLASSIFICATION:  435
;     ATTORNEY/AGENT INFORMATION:
;        NAME:  Haile, Lisa A.
;        REGISTRATION NUMBER:  38,347
;        REFERENCE/DOCKET NUMBER:  07265/048001
;     TELECOMMUNICATION INFORMATION:
;        TELEPHONE:  619/678-5070
;        TELEFAX:  619/678-5070
;  INFORMATION FOR SEQ ID NO:  7:
;     SEQUENCE CHARACTERISTICS:
;        LENGTH:  17 base pairs
;        TYPE:  nucleic acid
;        STRANDEDNESS:  single
;        TOPOLOGY:  linear
;     MOLECULE TYPE:  DNA (genomic)
US-08-446-530-7

   Query Match            100.0%;  Score 15;  DB 2;  Length 17;
   Best Local Similarity  100.0%;  Pred. No. 54;
   Matches   15;  Conservative   0;  Mismatches   0;  Indels   0;  Gaps   0;

Qy          1 CATCGCCTGGACTCC 15
              |||||||||||||||
Db          1 CATCGCCTGGACTCC 15
<!--EndFragment-->
```

SEQ ID NO. 11

10/553509

; Patent No. 5877283
; GENERAL INFORMATION:
;   APPLICANT: Shuldiner, Alan R.
;   APPLICANT: Walston, Jeremy
;   APPLICANT: Silver, Kristi
;   TITLE OF INVENTION: SUSCEPTIBILITY GENE FOR OBESITY AND TYPE
;   TITLE OF INVENTION: II DIABETES MELLITUS
;   NUMBER OF SEQUENCES: 28
;   CORRESPONDENCE ADDRESS:
;   ADDRESSEE: Fish & Richardson P.C.
;   STREET: 4225 Executive Square
;   CITY: La Jolla
;   STATE: CA
;   COUNTRY: USA
;   ZIP: 92037
;   COMPUTER READABLE FORM:
;   MEDIUM TYPE: Floppy disk
;   COMPUTER: IBM PC compatible
;   OPERATING SYSTEM: PC-DOS/MS-DOS
;   SOFTWARE: PatentIn Release #1.0, Version #1.30
;   CURRENT APPLICATION DATA:
;   APPLICATION NUMBER: US/09/097,562
;   FILING DATE:
;   CLASSIFICATION:
;   PRIOR APPLICATION DATA:
;   APPLICATION NUMBER: US 08/446,530
;   FILING DATE: 19-MAY-1995
;   ATTORNEY/AGENT INFORMATION:
;   NAME: Haile, Lisa A.
;   REGISTRATION NUMBER: 38,347
;   REFERENCE/DOCKET NUMBER: 07265/048001
;   TELECOMMUNICATION INFORMATION:
;   TELEPHONE: 619/678-5070
;   TELEFAX: 619/678-5070
; INFORMATION FOR SEQ ID NO: 7:
;   SEQUENCE CHARACTERISTICS:
; .   LENGTH: 17 base pairs
;   TYPE: nucleic acid
;   STRANDEDNESS: single
;   TOPOLOGY: linear
;   MOLECULE TYPE: DNA (genomic)
US-09-097-562-7

  Query Match   100.0%; Score 16; DB 2; Length 17;
  Best Local Similarity 100.0%; Pred. No. 30;
  Matches   16; Conservative   0; Mismatches   0; Indels   0; Gaps   0;

Qy   1 CATCGCCTGGACTCCG 16
              ||||||||||||||||
Db   1 CATCGCCTGGACTCCG 16

<!--EndFragment-->

<!--StartFragment-->RESULT 2
AAT58989
ID   AAT58989 standard; DNA; 17 BP.
XX
AC   AAT58989;
XX
DT   04-AUG-1997 (first entry)
XX
DE   Obesity and type II diabetes mellitus diagnosis nucleic acid probe.
XX
KW   Hybridisation; polymerase chain reaction; beta3-adrenergic receptor;
KW   beta3AR; ss.
XX
OS   Synthetic.
XX
PN   WO9636641-A1.
XX
PD   21-NOV-1996.
XX
PF   17-MAY-1996;   96WO-US007218.
XX
PR   19-MAY-1995;   95US-00446530.
XX
PA   (UYJO) UNIV JOHNS HOPKINS SCHOOL MED.
XX
PI   Shuldiner AR, Walston J, Silver K, Roth J;
XX
DR   WPI; 1997-012034/01.
XX
PT   New isolated beta3-adrenergic receptor mutation - used to develop prods.
PT   for the diagnosis and treatment of type II diabetes and/or obesity.
XX
PS   Claim 17; Page 42; 51pp; English.
XX
CC   The present sequence is a nucleic acid probe used in a method for
CC   diagnosis of a subject having or at risk of having type II diabetes
CC   mellitus and/or obesity. The method involves contacting a target nucleic
CC   acid of a sample from the subject with a nucleic acid probe (preferably
CC   the present sequence or that in AAT58990) that detects a mutation in the
CC   beta3-adrenergic receptor (beta3AR) gene. The present sequence can also
CC   be used in the treatment of subjects having or at risk of having type II
CC   diabetes and/or obesity
XX
SQ   Sequence 17 BP; 3 A; 7 C; 4 G; 3 T; 0 U; 0 Other;

       Query Match   100.0%; Score 16; DB 2; Length 17;
       Best Local Similarity   100.0%; Pred. No. 1.3e+02;
       Matches   16; Conservative   0; Mismatches   0; Indels   0; Gaps   0;

Qy   1 CATCGCCTGGACTCCG 16
             |||||||||||||||||
Db   1 CATCGCCTGGACTCCG 16

<!--EndFragment-->

<!--StartFragment-->I76279

```
LOCUS       I76279                   1134 bp    DNA     linear   PAT 03-APR-1998
DEFINITION  Sequence 14 from patent US 5691155.
ACCESSION   I76279
VERSION     I76279.1  GI:3012433
KEYWORDS    .
SOURCE      Unknown.
  ORGANISM  Unknown.
            Unclassified.
REFERENCE   1  (bases 1 to 1134)
  AUTHORS   Nahmias,C., Emorine,L.Jean. and Strosberg,A.Donny.
  TITLE     Nucleotide sequences encoding the murine .beta.3-adrenergic
            receptor and their applications
  JOURNAL   Patent: US 5691155-A 14 25-NOV-1997;
FEATURES             Location/Qualifiers
     source          1. .1134
                     /organism="unknown"
                     /mol_type="unassigned DNA"
ORIGIN
```

```
   Query Match              100.0%;  Score 61;  DB 2;  Length 1134;
   Best Local Similarity    100.0%;  Pred. No. 1.1e-11;
   Matches   61;  Conservative   0;  Mismatches   0;  Indels   0;  Gaps   0;

Qy        1 GGCCATCGCCTGGACTCCGAGACTCCAGACCATGACCAACGTGTTCGTGACTTCGCTGGC 60
            ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      180 GGCCATCGCCTGGACTCCGAGACTCCAGACCATGACCAACGTGTTCGTGACTTCGCTGGC 239

Qy       61 C 61
            |
Db      240 C 240
```

RESULT 2
<!--EndFragment-->

<!--StartFragment-->RESULT 2   LD/S3529   SEQ ID NO'. 1
I60415
LOCUS   I60415   1227 bp   DNA   linear   PAT 07-OCT-1997
DEFINITION Sequence 7 from patent US 5656440.
ACCESSION   I60415
VERSION   I60415.1 GI:2478860
KEYWORDS   .
SOURCE   Unknown.
  ORGANISM Unknown.
            Unclassified.
REFERENCE   1 (bases 1 to 1227)
  AUTHORS   Lenzen,G. and Kapoor,A.
  TITLE   Nucleotide sequences coding for the bovine .beta. .sub.3 -adrenergic
            receptor (AR.beta. .sub.3) and their applications
  JOURNAL   Patent: US 5656440-A 7 12-AUG-1997;
FEATURES   Location/Qualifiers
     source   1. .1227
                     /organism="unknown"
                     /mol_type="unassigned DNA"
ORIGIN

  Query Match   100.0%; Score 61; DB 2; Length 1227;
  Best Local Similarity   100.0%; Pred. No. 1.2e-11;
  Matches   61; Conservative   0; Mismatches   0; Indels   0; Gaps   0;

Qy   1 GGCCATCGCCTGGACTCCGAGACTCCAGACCATGACCAACGTGTTCGTGACTTCGCTGGC 60
          |||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db   180 GGCCATCGCCTGGACTCCGAGACTCCAGACCATGACCAACGTGTTCGTGACTTCGCTGGC 239

Qy   61 C 61
          |
Db   240 C 240
<!--EndFragment-->

10/ 553509.

SEQ ID NO. 1

```
;  Sequence 7, Application US/08351473B
;  Patent No. 5656440
;   GENERAL INFORMATION:
;     APPLICANT:  LENZEN, GERLINDA
;     APPLICANT:  KAPOOR, ARCHANA
;     TITLE OF INVENTION:  NUCLEOTIDE SEQUENCES CODING FOR THE
;     TITLE OF INVENTION:  BOVINE BETA3-ADRENERGIC RECEPTOR AND THEIR APPLICATIONS
;     NUMBER OF SEQUENCES:  9
;     CORRESPONDENCE ADDRESS:
;       ADDRESSEE:  OBLON, SPIVAK, MCLELLAND, MAIER & NEUSTADT
;       STREET:  1755 S. JEFFERSON DAVIS HIGHWAY, SUITE 400
;       CITY:  ARLINGTON
;       STATE:  VIRGINIA
;       COUNTRY:  USA
;       ZIP:  22202
;     COMPUTER READABLE FORM:
;       MEDIUM TYPE:  Floppy disk
;       COMPUTER:  IBM PC compatible
;       OPERATING SYSTEM:  PC-DOS/MS-DOS
;       SOFTWARE:  PatentIn Release #1.0, Version #1.30
;     CURRENT APPLICATION DATA:
;       APPLICATION NUMBER:  US/08/351,473B
;       FILING DATE:  21-FEB-1995
;       CLASSIFICATION:  435
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  93 04670
;       FILING DATE:  21-APR-1993
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  PCT/FR94/00447
;       FILING DATE:  21-APR-1994
;     ATTORNEY/AGENT INFORMATION:
;       NAME:  OBLON, NORMAN F.
;       REGISTRATION NUMBER:  24,618
;       REFERENCE/DOCKET NUMBER:  6639-001-0X PCT
;     TELECOMMUNICATION INFORMATION:
;       TELEPHONE:  (703) 413-3000
;       TELEFAX:  (703) 413-2220
;       TELEX:  248855 OPAT UR
;   INFORMATION FOR SEQ ID NO:  7:
;     SEQUENCE CHARACTERISTICS:
;       LENGTH:  1227 base pairs
;       TYPE:  nucleic acid
;       STRANDEDNESS:  single
;       TOPOLOGY:  linear
;     MOLECULE TYPE:  DNA (genomic)
US-08-351-473B-7

  Query Match          100.0%;  Score 61;  DB 2;  Length 1227;
  Best Local Similarity  100.0%;  Pred. No. 8.1e-13;
  Matches   61;  Conservative   0;  Mismatches   0;  Indels   0;  Gaps   0;

Qy         1 GGCCATCGCCTGGACTCCGAGACTCCAGACCATGACCAACGTGTTCGTGACTTCGCTGGC 60
             |||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       180 GGCCATCGCCTGGACTCCGAGACTCCAGACCATGACCAACGTGTTCGTGACTTCGCTGGC 239

Qy        61 C 61
             |
Db       240 C 240
<!--EndFragment-->
```